

3 Government Needs Today

3.1 Introduction

Federal and Territorial governments require reliable, affordable communication services within all communities and between communities to carry out their various mandates.

This section of the report provides an overview of federal and territorial governments' need for communication services today, including examples of various programs highlighted by departments that participated formally in the Assessment.

3.2 Gathering Input

Government agencies were invited to participate in one of six facilitated 'visioning workshops' held in Yellowknife, Whitehorse, Iqaluit and Ottawa. Every session had a mix of federal and territorial representatives. Each workshop had between 11 to 18 participants with over 75 government representatives attended. (See Appendix A for the list of participants).

Participants detailed their department's key responsibilities, communication services they use now and plan to use in the future, issues they face, and ideas to ensure communications services can meet their needs in the future.

In addition, an online survey gathered additional details from almost 100 respondents from a wide range of departments across the three territories and federal government. Data from the questionnaire was also supplemented by documents provided by government departments, with most information on Nunavut coming from data already collected by the Department of Community Government Services. The full survey can be found in Appendix B.

3.3 Federal Departments Serving Territories

Overview

There are approximately 2,000 federal employees working in the Arctic, with approximately 400 in Nunavut, 1,150 in the NWT and 550 in Yukon. The vast majority of Federal employees are located in the three regional capitals, with a handful of federal employees working in smaller communities, (such as Parks Canada staff.)

The RCMP are an exception, with members stationed in almost every Arctic community, with significant numbers of staff (both members and Federal/Divisional units) in each of the three capitals.

| Department Name | Staff in Arctic? | Visioning Workshop | Survey Response |
|--|-------------------------|---------------------------|------------------------|
| Agriculture and Agri-Food Canada | * | No | Yes |
| Canada Border Services Agency (CBSA) | * | Yes | Yes |
| Canada Revenue Agency (CRA) | 0 | Yes | No |
| Canadian Heritage | * | No | No |
| Canadian Northern Economic Development Agency (CanNor) | *** | Yes | Yes |
| Citizenship and Immigration | * | Yes | No |
| Canada Mortgage & Housing Corp. (CMHC) | * | No | No |
| Correctional Service of Canada (CSC) | * | Yes | Yes |
| Department of Fisheries and Oceans (DFO), including Coast Guard | *** | Yes | Yes |
| Department of National Defence (DND) | **** | Yes | Yes |
| Environment Canada (EC) | *** | Yes | Yes |
| Health Canada | 0 | Yes | No |
| Human Resources and Skills Development Canada (including Service Canada) (HRSDC) | *** | Yes | Yes |
| Indian and Northern Affairs Canada (INAC) | **** | Yes | Yes |
| Industry Canada | * | Yes | Yes |
| Justice | ** | No | Yes |
| Natural Resources Canada (NRCan) | ** | No | No |
| NavCan (not-for-profit agency) | * | Yes | Yes |
| Nunavut Federal Council | * | No | No |
| Nunavut Geoscience | * | No | No |
| NWT Federal Council | * | No | No |
| Parks Canada | *** | No | No |
| Public Health Agency of Canada (PHAC) | 0 | Yes | Yes |
| Public Safety (PS) | * | Yes | Yes |
| Public Prosecution Services of Canada | *** | No | No |
| Public Works and Government Services Canada (PWGSC) | ** | Yes | Yes |
| RCMP | **** | Yes | Yes |
| Rural Secretariat | * | No | No |
| *10 or less ** 11-50 personnel ***51-100 personnel ****101 or more | | | |
| Data was compiled using 2009 data provided by the Nunavut Federal Council, NWT Federal Council and Yukon Government Executive Council Office , with input from some individual departments. Due to variations in reporting from each territory, this report provides approximate numbers of staff with the purpose of providing relative sizes of departmental staffing. This data reflect full time positions, and do not include visiting military personnel, or Coast Guard vessel positions. | | | |

The three largest federal departments (measured by full time employees) operating in the Arctic are Indian and Northern Affairs Canada with approximately 450 personnel split between the three territories, followed by the RCMP located in all communities, and the Department of National Defence with 245 full time employees mostly in Yellowknife.

There are eight 'mid-sized' federal departments with between 50 and 100 personnel spread between the three territories, including CanNor, DFO, Environment Canada, HRSDC (Service Canada), Parks Canada, and Public Prosecution Services.

Remaining federal departments with responsibilities in the Arctic have somewhere between no staff and 50, with the majority having less than 10 people spread out across all three territories.

Because of the vast differences between federal departments' presence in the Arctic, their activities, and mandate, it is challenging to provide an overview that encapsulates the breadth and depth of federal communication needs. This proposal has divided the needs into two categories:

- Federal departments requiring services in communities
- Federal departments requiring communication services 'in the field'

Each section will illustrate these needs using examples raised by various departments in their efforts to meet their national objectives in the provision of federal services.

Federal departments requiring services in communities

Federal employees working in communities to deliver services need to be able to purchase affordable, robust communication services that allow them to communicate reliably with:

- Other government agencies and the public within their community in person and via communication networks;
- Federal offices in the south, interfacing with people, systems and software to carry out their mandate;
- Public located in communities within their Territory via public communication networks.

Federal employees who travel into communities to work (whether they are based in one of the capitals in the North, or are based in the South) need to be able to hook into local networks with their BlackBerries and laptops in order to maintain connectivity with their head offices. Federal employees look to local commercial networks to connect to stay in touch with their head offices.

Departments such as Indian and Northern Affairs Canada and CanNor have significant numbers of personnel in each of the three capitals. INAC carries out both a "northern

mandate” and an “Aboriginal mandate”, working extensively with other governments (Aboriginal, Territorial and other federal departments) and the public. Services include economic development initiatives, land management, and administering funding programs to name a few. Due to its large federal presence in the Arctic, INAC is one of the few federal departments that have staff who are responsible for connecting its employees to adequate communication resources. These IT professionals also support connectivity to some smaller federal departments.

Service Canada (under HRSDC) has a large presence in the Arctic, with staff in each of the three capitals. They have a huge need to be able to connect with the public locally, and in communities. They deliver direct federal services such as supporting Canadians in retraining, family support programs, employment programs, retirement programs such as Canada Pension, supporting Service Canada activities etc. Service Canada also runs an outreach program whereby employees go into community for a short period of time with a laptop and information to offer services to the public.

Both INAC and Service Canada maintain storefront operations, conduct outreach into communities, and rely on databases and systems located in the south in order to do their work.

Departments with a smaller physical presence such as Justice, PWGSC, Industry Canada, the Correctional Service of Canada (CSC), Citizenship and Immigration, Agriculture and Agri-Food, CMHC and Canadian Heritage are in constant communication with their southern counterparts in carrying out their work, from policy development and service delivery to solving trouble tickets when their communications are down.

Departments such as Health Canada and CRA have no staff in the Arctic, but rely on good communication networks in order to work with Territorial governments and the public in the delivery of information and services to the public.

The RCMP is a unique federal agency from a communications perspective. They are the only department with permanent staff in all Arctic communities. All officers require 99.9% reliable communications capability into and out of every Arctic community no matter how small, in order for the RCMP to provide appropriate support to front line police officers.

Another unique federal agency is the Canada Border Services Agency, which supports border agents along the Yukon-Alaska border in carrying out their duties. They require constant connectivity from remote border locations in order to conduct critical queries on travelers entering Canada, requiring robust networks that can communicate with southern servers. These sites are not typically located within existing communities, so CBSA cannot take advantage of any existing community-based commercial communication services.

Today, all federal employees working in Arctic communities require robust, reliable communication networks in their place of work (at their office or when visiting communities) that properly support voice and data connections in order to do their jobs.

Most of these federal departments rely on the existence of commercial services that can be purchased to meet their needs. In most cases, these connections are organized by southern IT specialists, who are responsible for providing services in many jurisdictions across the country, including the north.

Federal agencies requiring communication services ‘in the field’

Many federal departments must support seasonal researchers, emergency responders, and military personnel who travel in and out of communities and do work ‘on the land’ for extended periods of time. These staff are required to have communication services back to head office while ‘in the field’.

Examples of these types of activities include:

- collecting environmental data;
- responding to emergencies wherever they occur;
- tracking wildlife;
- ensuring Arctic sovereignty.

Additional communication networks are required for the collection and timely distribution of data so that people, ships and aircraft can travel more safely through the Arctic, such as:

- providing navigational aid to ships and aircraft;
- monitoring weather.

These federal agencies need to be able to purchase communication services that work in all corners of the Arctic - both within communities and between communities.

Examples of departments who engage in this ‘in the field’ communications work include Public Safety, Department of Fisheries and Oceans (including Coast Guard), Environment Canada (including Canadian Wildlife Services), NRCan, Parks Canada, Department of National Defence and NavCan.¹

Public Safety regional office needs to be able to connect with their northern/southern counterparts no matter what location they happen to be in at the time of an event. The Public Safety mandate is that of a coordination function, in which the regional office is the primary link for federal and territorial emergency management. Therefore this is why

¹ NavCan is now a not-for-profit private agency, but they work closely with Environment Canada to collect and distribute environmental information critical to the safe operations of aircraft in the Arctic. They participated in the assessment because of their public role in providing air traffic control services for flights over 27,000 feet traversing arctic air space. They collect and manage critical data from over 50 sites across the North, and work with every Arctic airport.

Public Safety concerns itself with ensuring emergency response organizations located throughout the territories are properly connected, and that systems used can interoperate with each other in the field in the event of an emergency. In the event of a large scale event such as a Major Air Disaster (MAJAID) or an earthquake, there are many levels of responders that would need to be coordinated and connected to ensure an efficient and timely response.

Department of National Defense (DND) has over 200 staff stationed in Yellowknife as part of Joint Task Force North (JTFN). JTFN requires robust connectivity to DND headquarters in the south, similar to any other federal government office located in the north.

DND has many initiatives and responsibilities that require advanced communication services in locations outside of communities. DND connects various remote Arctic military sites to DND headquarters, participates in search and rescue, and are responsible for sovereignty up to the North Pole. DND maintains its own HF Radio system for communications, and uses a variety of satellite connections to link to headquarters.

The Coast Guard also has a wide range of responsibilities in the Arctic reliant on communication services. For example Coast Guard is required to provide internationally compliant communications system so that every vessel can report their information prior to entering and exiting Canada's northern waters. They must implement the Global Maritime Distress and Safety System in the Arctic, and provide vessel traffic services via VHF.

Environment Canada runs many programs that require connectivity between communities. The science-based department conducts field work, operates non-manned research stations, and provides advice to those responding to an environmental emergency. The Canadian Wildlife Service performs extensive field surveys across the Arctic on wildlife and wildlife habitat, and manages 18 Bird Sanctuaries and National Wildlife Areas across the NWT and Nunavut. The Meteorological Service of Canada (MSC) relies on communication infrastructure to receive data from remote high arctic weather / upper air stations and marine buoys to send weather data to their main data centre in Montreal.

In Resolute Bay, Polar Continental Shelf researchers (under NRCan) use the local QINIQ service to link their researchers while in their base camp in Resolute. But due to the nature of their work, scientists returning from the field need to move many GB of data every day - reaching the bandwidth caps set by the publicly available network extremely quickly. They also need to be able to reach researchers just outside the community, outside of the local network's range. In order to solve the researchers' GB and coverage challenge, IT professionals from the Communications Research Centre (CRC) installed a custom-built network linked to a larger specialized KA band satellite dish that linked researchers to the Internet backbone over satellite. This local network was built entirely separately from the local system in order to solve the researchers' GB challenge. It is

maintained by CRC staff in Resolute. The researchers also continue to maintain their local QINIQ accounts too.

In summary, Federal agencies are directly responsible for activities in the Arctic that rely on both commercially-available connectivity within communities, and on communication networks outside of communities that must be developed specifically to meet Federal needs.

3.4 Yukon

Yukon has the most established communications infrastructure of the three Territories.

Yukon is also the most road-connected Territory, with only one fly-in community. Their large network of roads also requires that they have communication services between communities to support traveling government employees, and to serve and protect the traveling public.

Yukon has approximately 4,800 government employees, with about 3,800 of them in Whitehorse and the remaining 1,000 working throughout Yukon.

The chart below shows population, number of government employees and students. Whitehorse, with a population of 26,761, is by far the largest community with 14 times more people than the next largest town of Dawson City with a population of 1,881. Of the remaining communities, only Watson Lake and Haines Junction has more than 500 people.

While Whitehorse dominates the territory from a population standpoint, the Yukon Government works to ensure all people in the territory have equal access to all programs offered by the government, no matter where people live.

| | Population | Yukon Government employees | Students |
|-----------------|-------------------|---|-----------------|
| Beaver Creek | 104 | 31 | 7 |
| Burwash Landing | 104 | 6 | ** |
| Carcross | 431 | 68 | 46 |
| Carmacks | 485 | 70 | 104 |
| Dawson City | 1881 | 234 | 188 |
| Destruction Bay | 47 | 20 | 9 |
| Faro | 390 | 50 | 39 |
| Haines Junction | 809 | 130 | 131 |
| Mayo | 439 | 78 | 61 |
| Old Crow* | 233 | 27 | 32 |
| Pelly Crossing | 320 | 31 | 47 |
| Ross River | 352 | 55 | 61 |
| Tagish | 245 | 1 | ** |
| Teslin | 463 | 54 | 58 |

| | Population | Yukon Government employees | Students |
|---|-------------------|-----------------------------------|-----------------|
| Watson Lake | 1525 | 176 | 203 |
| Whitehorse*** | 26761 | 3846 | 4089 |
| Other**** | 78 | 65 | |
| TOTAL YUKON: | 34667 | 4877 | 5075 |
| <p>Data for this chart was obtained from http://www.eco.gov.yk.ca/stats/pdf/population_dec_2010.pdf and from the Yukon Government Department of Education, with explanatory notes from Department of Economic Development.</p> <p>*Satellite served community</p> <p>**Students in Burwash Landing attend school in Destruction Bay. Tagish has no school.</p> <p>*** Includes population of Marsh Bay, 457.</p> <p>****"Other" population refers to very small communities such as Champagne, Elsa, Johnson's Crossing, Keno City, Stewart Crossing, and Swift River totaling 78 people. "Other" Yukon Government staff totaling 58 refers to workers at Transportation Maintenance Camps in Blanchard, Drury Creek, Eagle, Fraser, Ogilvie, Swift River and Tuchitua. This also includes Hershcel Island - a Parks Yukon site with seasonal workers.</p> | | | |

Yukon departments have implemented advanced digital government services that rely on a robust communications infrastructure. All departments are making use of their communications infrastructure to manage and deliver many programs and services.

For example, Health and Social Services is implementing a digital x-ray program that relies on the movement of large digital files into and out of communities and to the south for analysis. Their acute care facilities in communities are linked more and more to the hospital in Whitehorse to extend services to communities, through new communication tools. They have well-established home care services in all communities, and public health programs such as immunization programs that utilize communication tools to operate effectively, efficiently and safely.

Education connects 2,900 students and teachers in the 30 schools throughout Yukon. They have a long list of applications used within schools to extend the delivery of education via distance education, and improve efficiency in the management of education in the Territory. They are even working on an advanced bus scheduling system with GPS tracking to help ensure the safety of students on busses.

Justice, Health and Education all make extensive use of videoconferencing in the delivery of their programs, requiring significant bandwidth and low latency to operate.

Emergency Measures and Protective Services have many initiatives that rely on robust communications, as they work to respond to, and prepare for emergencies in all locations in Yukon. This department has a vital need to connect responders between communities.

The recent launch of the Mobile Radio System (MRS) is a key communication tool that supports EMO and other first responders all over Yukon.

Many key departments participated in the Assessment. Representatives from Highways and Public Works ICT branch represented other departments in identifying specific communication needs in the visioning workshops.

Yukon Government departments include:

| Department | Url | Partici- pated in Workshop | Partici- pated in Survey |
|--|---|----------------------------------|--------------------------------|
| Community Services (EMO, Protective Services & Public Libraries) | http://www.community.gov.yk.ca/ | Yes | Yes |
| Economic Development (Finance and Info Serv) | http://www.economicdevelopment.gov.yk.ca/ | Yes | Yes |
| Education | http://www.education.gov.yk.ca/ | No | Yes |
| Energy, Mines and Resources | http://www.emr.gov.yk.ca/ | No | Yes |
| Environment | http://www.environmentyukon.gov.yk.ca/ | No | No |
| Executive Council Office | http://www.eco.gov.yk.ca/ | Yes | Yes |
| Finance | http://www.finance.gov.yk.ca/ | No | No |
| French Language Services Directorate | http://www.flsd.gov.yk.ca/ | No | No |
| Health and Social Services | http://www.hss.gov.yk.ca/ | No | Yes |
| Highways and Public Works (ICT branch) | http://www.hpw.gov.yk.ca/ | Yes | Yes |
| Justice | http://www.hpw.gov.yk.ca/ | No | Yes |
| Public Service Commission | http://www.psc.gov.yk.ca/ | No | No |
| Tourism and Culture | http://www.tc.gov.yk.ca/ | No | No |
| Women's Directorate | http://www.womensdirectorate.gov.yk.ca/ | No | No |

Please see Appendix C for a specific listing of some of the applications identified by the various departments as part of this assessment.

3.5 Northwest Territories

The Northwest Territories is the most populous territory, with the most significant difference in communication services within its borders. At one end of the scale, Yellowknife has the best communication access, while the 10 communities relying on satellite currently have the poorest government communication services.

Yellowknife is the largest city at almost 20,000 people - almost half of the population. It is only 6 times larger than the next largest community of Hay River, which has 3,700 people. Other medium sized communities include Inuvik, Fort Smith, and Behchoko all with over 2,000 people. Fort Simpson has 1,200, and 10 other communities have between 500 and 1,000 people, some of which are served by satellite. This population distribution means that communication networks must support a good deal of traffic between communities within the NWT, as networks are required to support services to half of the population located outside of the capital.

| | Population | NWT Government Employees | Students |
|-------------------|-------------------|---|-----------------|
| Aklavik | 658 | 57 | 146 |
| Behchoko | 2080 | 169 | 604 |
| Colville Lake | 158 | 9 | 41 |
| Deline* | 567 | 40 | 134 |
| Detah | 260 | 0 | 53 |
| Enterprise | 98 | 14 | n/a |
| Fort Good Hope* | 592 | 40 | 117 |
| Fort Liard | 587 | 41 | 122 |
| Fort McPherson | 795 | 54 | 195 |
| Fort Providence | 767 | 64 | 196 |
| Fort Resolution | 494 | 42 | 102 |
| Fort Simpson | 1270 | 211 | 251 |
| Fort Smith | 2483 | 494 | 601 |
| Gamèti* | 301 | 14 | 82 |
| Hay River | 3726 | 283 | 745 |
| Hay River Reserve | 328 | 22 | 71 |
| Inuvik | 3552 | 495 | 667 |
| Jean Marie River | 71 | 2 | 9 |
| Kakisa | 55 | 2 | 8 |
| Lutselk'e* | 297 | 23 | 81 |
| Nahanni Butte* | 120 | 6 | 21 |
| Norman Wells* | 816 | 117 | 140 |
| Paulatuk* | 336 | 22 | 83 |
| Sachs Harbour* | 134 | 9 | 21 |
| Trout Lake* | 100 | 12 | 16 |
| Tsiigehtchic | 123 | 8 | 38 |

| | Population | NWT Government Employees | Students |
|---|-------------------|---|-----------------|
| Tuktoyaktuk | 916 | 42 | 199 |
| Tulita* | 564 | 36 | 138 |
| Ulukhaktok | 472 | 31 | 97 |
| Wekw eèti | 141 | 7 | 30 |
| Wha Ti* | 497 | 27 | 144 |
| Wrigley | 113 | 13 | 21 |
| Yellowknife | 19927 | 2209 | 3406 |
| Other** | 361 | | |
| Total NWT | 43759 | 4615 | 8579 |
| Data for this chart came from: NWT Statistics, 2010 http://www.stats.gov.nt.ca/population/population-estimates/commtotal.html NWT Public Service Annual report, 2009, NWT Dept of Education, Grade Distribution of Enrollment, 2010 *Satellite served communities **Unorganized areas, population of less than 50 | | | |

There are 4,600 NWT government employees working in all 33 communities in NWT. Of these, almost half work in Yellowknife. The remaining 2,400 government employees work in communities all over NWT.

The wide range of quality of communications services within the territory means that government's efforts to launch new digital services must always consider which communities can be served and which can not be served effectively in any new digital initiative.

Many departments are working on creative new services, that rely on robust communication networks. They would like infrastructure solutions to bring up the level of service in under-served communities, so that new services can be implemented everywhere equally.

The Technology Service Centre (TSC) supports over 4,000 government employees with workplace support, enterprise-wide services, such as e-mail and other communication and network services and tools, and host many department applications and websites. They provide advice to departments when selecting and implementing technology solutions. The TSC recently built a large data centre in Yellowknife to meet the growing data storage needs of the GNWT.

According to the Technology Service Centre, Health and Education account for about 80% of all traffic on government networks.

For example, Education connects over 8,000 students, teachers and parents in a Student Information System. They provide remote education for children aimed at increasing access to specialized teachers from the south through e-learning.

Health and Social Services have many initiatives that rely on good connectivity, and need to “bend the trend” of rising costs by looking at ways to deliver better services to everyone, at a lower cost. They are actively implementing new technology that aims to improve service delivery to patients throughout NWT at lower costs. Efforts include increased telehealth for specialist connections, better electronic record management through PACS (Picture Archiving and Communication System), increased computing radiography rolled out in 18 communities, plus Telespeech projects in schools that link students by videoconferencing with speech therapy services in other communities.

Environment and Natural Resources require connectivity between communities to carry out their mandate. They collect and shares data on species, publish wildlife management information, administer a remote research station, and download satellite data from collared animals. They also by collect and report on the state of forest resources, integrating geomatics, information management, fire prevention, community protection, environmental monitoring, disturbance mapping, and collaboration with national and global fire management agencies.

The participation rate in the survey from the NWT departments was extremely high. Representation of many departments for the visioning workshop was provided by the Technology Service Centre (TSC) within Public Works and Services. Please see Appendix C for a list of applications identified by participating departments.

| Department | Url | Participated in Workshop | Participated in Survey |
|---------------------------------------|---|-----------------------------|---------------------------|
| Aboriginal Affairs & Intergov'l Rel's | http://www.daair.gov.nt.ca/ | No | No |
| Aurora College | http://www.auroracollege.nt.ca/ | No | Yes |
| Education, Culture & Employment | http://www.ece.gov.nt.ca/ | No | Yes |
| Environment & Natural Resources | http://www.enr.gov.nt.ca/ | Yes | Yes |
| Executive | http://www.executive.gov.nt.ca/ | No | Yes |
| Finance | http://www.fin.gov.nt.ca/ | No | No |
| Health & Social Services | http://www.hlthss.gov.nt.ca/ | No | Yes |
| Human Resources | http://www.hr.gov.nt.ca/ | No | Yes |
| Industry, Tourism & Investment | http://www.iti.gov.nt.ca/ | Yes | Yes |
| Justice | http://www.justice.gov.nt.ca/ | No | Yes |
| Legislative Assembly | http://www.assembly.gov.nt.ca/ | No | No |
| Municipal & Community Affairs | http://www.maca.gov.nt.ca/ | Yes | Yes |
| Public Works & Services | http://www.pws.gov.nt.ca/ | Yes | Yes |
| Transportation | http://www.dot.gov.nt.ca/ | No | Yes |

3.6 Nunavut

More than any other territorial jurisdiction, Nunavut's government relies on a robust communication infrastructure in order to operate efficiently.

Nunavut took a decentralized approach when setting up its government in 1999, to share government employment opportunities with as many communities as reasonably possible. So while the capital of Iqaluit has the most government employees, many departments' headquarters and regional offices are located in the ten 'decentralized' communities.

Nunavut has an entirely different dynamic in terms of the relationship of the capital to other communities, simply because of the way the population is distributed. Iqaluit represents only 21% of the total population of Nunavut, with 7,000 people out of 33,000. The next largest community, Rankin Inlet, is just under half the size of Iqaluit, with 2,730 people. In contrast, Whitehorse has more than 75% of the population of Yukon, and has 14 times more people than the next largest community. Yellowknife accounts for almost half the population of the NWT, and has 6 times more people than the 2nd largest community.

| Community* | Government of Nunavut | | |
|--------------------|-----------------------|-----------|----------|
| | Population | employees | Students |
| Arctic Bay | 746 | 55 | 222 |
| Arviat** | 2339 | 194 | 848 |
| Baker Lake** | 1963 | 113 | 592 |
| Cambridge Bay** | 1626 | 222 | 399 |
| Cape Dorset** | 1407 | 117 | 367 |
| Chesterfield Inlet | 383 | 29 | 99 |
| Clyde River | 922 | 58 | 306 |
| Coral Harbour | 870 | 54 | 285 |
| Gjoa Haven** | 1138 | 101 | 331 |
| Grise Fiord | 154 | 16 | 36 |
| Hall Beach | 718 | 35 | 177 |
| Igloolik** | 1686 | 146 | 498 |
| Iqaluit | 7010 | 1514 | 1340 |
| Kimmirut | 455 | 32 | 133 |
| Kugaaruk | 738 | 48 | 250 |
| Kugluktuk** | 1427 | 136 | 292 |
| Pangnirtung** | 1476 | 129 | 378 |
| Pond Inlet** | 1465 | 152 | 419 |
| Qikiqtarjuaq | 534 | 43 | 109 |
| Rankin Inlet** | 2730 | 423 | 746 |
| Repulse Bay | 875 | 44 | 311 |
| Resolute Bay | 255 | 20 | 55 |

| Community* | Population | Government of Nunavut employees | Students |
|---|-------------------|--|-----------------|
| Sanikiluaq | 810 | 52 | 264 |
| Taloyoak | 891 | 40 | 255 |
| Whale Cove | 400 | 31 | 143 |
| Unorganized (total) | 30 | | |
| TOTAL NUNAVUT: | 33048 | 3804 | 8855 |
| Data for this chart came from http://www.eia.gov.nu.ca/stats 2011 estimates, Department of Human Resources and Dept of Education Enrollment headcount and FTE Verification 2010-2011 | | | |
| *All communities are satellite served. | | | |
| **'decentralized' communities: communities with GN offices | | | |

Of the 24 communities in Nunavut (not including Iqaluit), 2 communities have over 2,000 people, 8 communities have over 1,000 people, 8 have between 500 and 1,000 people, and only 5 communities have under 500 people.

Of the 3,800 government employees, 1,500 work in Iqaluit. The 10 decentralized communities - those with government offices - all have at least 100 government positions, with Rankin Inlet having over 400.

Clearly, connectivity to meet government's ability to operate effectively is a top priority to carry out the internal work of government, due to the decentralized nature of the government offices.

The need is great for communication services in Nunavut to support government delivery of services to the public as well -- whether they live in a 'decentralized' community or not.

Educators need distance education tools. Human resources requires intelligent systems for managing human resources. Every department wants to make use of videoconferencing to reduce costs and improve access to services. But currently most of these initiatives are not yet implemented.

The good news is, that all 25 communities face essentially the same basic infrastructure challenges, since all are served by satellite. This means that when planning service delivery, Nunavut can choose systems that if they work in Arviat, they can be made to work in Grise Fiord.

The bad news is, that due to their infrastructure challenges and overall youth of their government, they have not yet been able to take advantage of many of the digital services being developed in the NWT and Yukon yet.

Nunavut also has the added challenge that the majority of people speak Inuktitut as their first language, with a significant portion of the population unilingual Inuktitut speakers. All public services must be available in Inuktitut and English, and are also often offered in Inuinaqtun and French which are also official languages in Nunavut. In addition, Inuktitut in the Kivalliq and Baffin region use a syllabic font, (not roman orthographic that is universally recognized by computers) requiring all software to recognize unicode in order for Inuktitut to be sorted and displayed properly over digital communication tools. The need for using a syllabic writing system adds another level of complexity when managing databases in Inuktitut and communicating over the Internet.

Government Departments include:

| Department | Url | Partici- pated in Workshop | Partici- pated in Survey |
|---|---|----------------------------------|--------------------------------|
| Community and Government Services | http://cgs.gov.nu.ca/en/ | Yes | Yes |
| Culture, Language, Elders and Youth | http://www.cley.gov.nu.ca/en/ | Yes | No |
| Economic Development and Transportation | http://www.edt.gov.nu.ca/apps/authoring/dspPage.aspx?page=home | Yes | No |
| Education | http://www.edu.gov.nu.ca/apps/authoring/dspPage.aspx?page=home | Yes | Yes |
| Environment | http://env.gov.nu.ca/ | No | No |
| Executive and Intergovernmental Affairs | http://www.eia.gov.nu.ca/en/about.aspx | No | No |
| Finance | http://www.finance.gov.nu.ca/apps/authoring/dspPage.aspx?page=home | No | No |
| Health and Social Services | http://www.hss.gov.nu.ca/en/Home.aspx | No | No |
| Human Resources | http://www.gov.nu.ca/hr/site/index.htm | Yes | Yes |
| Justice | http://www.justice.gov.nu.ca/apps/authoring/dspPage.aspx?page=home | No | No |

There was an excellent turn out of GN departmental representatives at the visioning workshops in Iqaluit. Those departments that were unable to attend were represented by Community and Government Services, which is responsible for connecting government

employees across Nunavut. Much of the feedback from these representatives is captured in the “issues” section, which best reflects the communication situation in Nunavut today.

The Government of Nunavut provided a single comprehensive list of the current applications being run by various departments, since they had just completed an internal assessment with some of the same questions in this assessment. Those specific applications are included in Appendix C. To avoid duplication of effort, very few individual departments filled in this assessment’s survey.